



Attorney Docket # 5255-43PUS

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Thomas SALUTZKI et al.

Serial No.: 10/518,702

Filed: December 20, 2004

For: Drive Device for Opening or Closing a Door or
Similar

Examiner: Williams, Thomas J.
Group Art: 3683

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Name of Applicant, assignee, or Registered Representative

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Commissioner for Patents

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APPEAL BRIEF

SIR:

This is an appeal, pursuant to 37 C.F.R. § 41.37 from the decision of the Examiner in the above-identified application, as set forth in the Final Office Action of January 17, 2008 and the Advisory Office Action of April 4, 2008 wherein the Examiner finally rejected appellant's claims. The rejected claims are reproduced in the Appendix A attached hereto. A Notice of Appeal was filed on April 17, 2008.

The fee of \$510.00 for filing an Appeal Brief (Large Entity) pursuant to 37 C.F.R. § 41.20 is submitted herewith. Any additional fees or charges in connection with this application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

REAL PARTY IN INTEREST

The assignee, Dorma GmbH + Co. KG, of applicant, Thomas Salutzki, is the real party of interest in the above-identified U.S. Patent Application.

RELATED APPEALS AND INTERFERENCES

There are no other appeals and/or interferences related to the above-identified application at the present time.

STATUS OF CLAIMS

Claims 1-8, 11 and 17-21 have been cancelled. Claims 9, 10 and 12-16 have been finally rejected. Claims 9, 10 and 12-16 are on appeal.

STATUS OF AMENDMENTS

A Request for Reconsideration was filed on March 14, 2008 subsequent to the Final Office Action. In response, on April 4, 2008, the Examiner maintained his Final rejection of the claims.

SUMMARY OF THE CLAIMED SUBJECT MATTER

Appellant's invention recited in claim 9 is directed to an apparatus for opening and closing a door leaf (see FIG. and paragraph [0001], lines 1-2 of the specification as originally filed). The apparatus comprises a housing 1 made of polyoxymethylene plastic (see paragraph [0017], lines 3-5; FIG.), where the housing 1 has a recess (see paragraph [0017], line

1; FIG.); a piston 3 made of polyoxymethylene plastic (see paragraph [0017], lines 3-5; FIG.), where the piston 3 has a toothed rack and is arranged for movement in the recess (see paragraph [0019], lines 1-2; FIG.); a closing shaft 4 comprising a pinion 6 which engages the rack to drive the piston 3 in the recess (see paragraph [0018], lines 1-5; FIG.); and a closing spring 2 which is arranged in the recess acting on the piston 3 oppositely to the closing shaft 4 (see paragraph [0017], lines 2-3; FIG.).

In accordance with the claimed invention, the toothed rack is made of metal (see paragraph [0020], lines 1-3; FIG.) and is embedded in the piston 3 by molding the polyoxymethylene plastic around the rack so that the rack and the piston 3 form a one-piece element (see paragraph [0020], line 2; FIG.).

GROUND OF REJECTION TO BE REVIEWED IN APPEAL

1. Whether claims 9, 10 and 12-16 are patentable under 35 U.S.C. §102(e) over U.S. Patent No. 6,618,899 (“*Ginzel*”), which incorporates U.S. Patent No. 4,019,220 (“*Lieberman*”)?
2. Whether claims 9, 10 and 12-16 are patentable under 35 U.S.C. §103(a) over WO 00/36255 (which is the corresponding International Application of *Ginzel*) in view of U.S. Patent No. 6,077,908 (“*Yahiro*”)?

ARGUMENT

1. Independent claim 9 recites, *inter alia*, “a piston made of polyoxymethylene plastic, the piston having a toothed rack... wherein the toothed rack is made of metal and is embedded in the piston by molding the polyoxymethylene plastic around the rack so that the rack and the piston form a one-piece element”.

The Examiner (at pg. 3 of the January 17, 2008 Final Office Action) takes the position that *Lieberman* discloses a rack which is made of metal and a piston which is molded around the rack. Appellant disagrees.

Lieberman teaches a piston assembly 16 formed by a main body 26 and a rack 28 (*see*, col. 1, ll. 38-44). *Lieberman* explicitly teaches that the main body 26 and the rack 28 are made separately and coupled together. In one example, the rack 28 is supported on a tripodal support formed by bosses 52, 54, 56 (*see, e.g.*, col. 3, ll. 35-37 and Fig. 1-3). There is no teaching or suggestion in *Lieberman* that the main body 26 is molded around the rack 28 as asserted in the Office Action.

Also on page 3 of the Final Office Action, the Examiner considers the claim features “[the toothed rack being] embedded in the piston by molding the polyoxymethylene plastic around the rack” as a process step and takes the position that such a “process step can not be relied upon for determining patentability in an apparatus claim”. In support of this, the Examiner relies on MPEP 2113, which reads in part as follows:

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product.

See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding “interbonded by interfusion” to limit structure of the claimed composite and noting that terms such as “welded,” “intermixed,” “ground in place,” “press fitted,” and “etched” are capable of construction as structural limitations.).

Appellant points out that the leading cases in this area include *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), and *In re Pilkington*, 162 USPQ 145, 147 (CCPA 1969). These cases explain when a “product-by-process” claim is patentable. Basically, these cases elucidate the principle that in order to be patentable, the product must have structural characteristics that distinguish it from the prior art. It cannot be the same as or obvious from the prior art product. In *Thorpe*, the product, though made by a different process, was no different than the product made by a prior art process. Thus, the claims were held to be unpatentable. In *Pilkington*, on the other hand, the product (plate glass manufactured on a bed of molten metal), the claims were found to be patentable because the glass itself was different from the prior art plate glass made with rollers. This is the seminal case on product-by-process claims, and is still good law.

Product-by-process claims are useful when the process of manufacture imparts unique and useful characteristics to a product, but there is no easy way to describe those characteristics besides referring to the manufacturing process. Such was the case in *Pilkington*, and such is the case here. The molding of the plastic piston around the rack creates an integrated one-piece structure wherein the molding of the plastic around the rack would be readily apparent to one skilled in the art. At the same time, there is no convenient way to describe this structure other than by reference to the manufacturing process.

Neither *Ginzel* nor *Lieberman* suggests a plastic piston which is molded around a metal rack. *Ginzel* discloses plastic piston with a plastic rack, and *Lieberman* discloses a metal rack which is attached to a piston after the two components have been separately manufactured.

Neither reference suggests molding a plastic piston around a metal rack, and consequently does not suggest the structure created by this process.

The Federal Circuit has stated that “anticipation requires the disclosure in a single prior art reference of each element in the claim under consideration”. *W.L. Gore & Assoc. v. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). The Federal Circuit has also stated that ‘anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim*’. Since *Ginzel* (which incorporates *Lieberman*) does not disclose all of the elements in the claim under consideration, arranged as in the claim, it does not represent an anticipation.

The April 4, 2008 Advisory Action adds nothing to establish a *prima facie* case of anticipation or obviousness. Here, the Examiner points out that the figure does not illustrate the toothed rack, which to his way of thinking would somehow illustrate the qualities of a piston molded around the rack. However, as pointed out above, product-by-process limitations are used where the structural qualities are not otherwise readily defined. Likewise, they are not readily illustrated. The Examiner also expresses the opinion that the process recited by Appellant does not in fact provide unique or useful characteristics beyond that of the prior art, since the remarks are not supported by the disclosure. This statement misapprehends the law, which requires that the prior art disclose the claimed features. Since the prior art fails to disclose “a piston made of polyoxymethylene plastic, the piston having a toothed rack... wherein the toothed rack is made of metal and is embedded in the piston by molding the polyoxymethylene plastic around the rack so that the rack and the piston form a one-piece element”, the absence of a detailed discussion in Appellant’s specification does not detract from patentability.

Since the Examiner has failed to establish a *prima facie* case of unpatentability, then without more the Appellant is entitled to the grant of a patent. *In re Oetiker*, 977 F.2d 1443, 22 USPQ 2d 1443 (Fed. Cir. 1992).

Dependent claims 10 and 12-16 are patentable for at least the same reasons that independent claim 9 is patentable.

For the foregoing reasons, it is respectfully submitted that the teachings of *Ginzel/Lieberman* fail to establish a *prima facie* case of unpatentability with regard to the subject matter recited in claims 9, 10 and 12-16. The Final Rejection of claims 9, 10 and 12-16 should therefore be reversed.

2. As is discussed in detail above, *Ginzel/Lieberman* fails to suggest an important structural feature of independent claim 9. *Yahiro* is cited in the Office Action as disclosing using polyoxymethylene plastic to make a variety of products and does not remedy the above discussed deficiencies of *Ginzel/Lieberman*. As a result, the combination of *Ginzel* and *Yahiro* also fails to teach or suggest the above recited claim features of independent claim 9.

Dependent claims 10 and 12-16 are allowable for at least the same reasons that amended independent claim 9 is allowable, as well as for the additional limitations recited therein.

Moreover, it is noted that *Ginzel* fails to disclose teach or suggest the recited limitation “wherein the bearing shells are press fit into the housing” (emphasis added) of dependent claim 13. Col. 9, lines 11-18 of *Ginzel* merely states that parts made of plastic are

connected to each other by gluing, ultrasonic welding, laser welding, or similar methods. However, there is no mention of press fit.

Similarly, *Ginzel* fails to disclose, teach or suggest that an end plug is pressed into the housing, as expressly recited in claim 15.

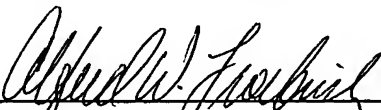
For the foregoing reasons, it is respectfully submitted that the combined teachings of the cited art fail to establish a *prima facie* case of obviousness with regard to the subject matter recited in claims 9, 10 and 12-16. The Final Rejection of claims 9, 10 and 12-16 should therefore be reversed.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that Appellant's claims are not anticipated or rendered obvious by *Ginzel/Lieberman* and/or *Yahiro* and are, therefore, patentable over the art of record, and the Examiner's rejections should be reversed.

Respectfully submitted,
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CLAIMS APPENDIX

1. - 8. (Canceled)

9. (Previously Presented) Apparatus for opening and closing a door leaf, the apparatus comprising:

a housing made of polyoxymethylene plastic, the housing having a recess;

a piston made of polyoxymethylene plastic, the piston having a toothed rack and being arranged for movement in the recess;

a closing shaft comprising a pinion which engages the rack to drive the piston in the recess; and

a closing spring arranged in the recess acting on the piston oppositely to the closing shaft,

wherein the toothed rack is made of metal and is embedded in the piston by molding the polyoxymethylene plastic around the rack so that the rack and the piston form a one-piece element.

10. (Previously Presented) The apparatus of claim 9, wherein the piston and the housing are injection molded.

11. (Canceled)

12. (Previously Presented) The apparatus of claim 9, wherein the housing is fitted with bearing shells which support the closing shaft, the bearing shells being made of polyoxymethylene plastic.

13. (Previously Presented) The apparatus of claim 12, wherein the bearing shells are press fit into the housing and welded to the housing by ultrasonic welding.

14. (Previously Presented) The apparatus of claim 9, wherein the recess has an open end which is sealed by an end plug, the end plug being made of polyoxymethylene plastic.

15. (Previously Presented) The apparatus of claim 14, wherein the end plug is pressed into the housing and welded to the housing by ultrasonic welding.

16. (Previously Presented) The apparatus of claim 9, further comprising hydraulic bores in the housing, the bores having outlets which are sealed by plugs made of polyoxymethylene plastic.

17. - 21. (Canceled)

EVIDENCE APPENDIX

NONE.

RELATED PROCEEDINGS APPENDIX

NONE.